

STIC Search Report Biotech-Chem Library

STIC Database Tracking Number: 141014

TO: Rei-Tsang Shiao Location: 5a10 / 5c18

Wednesday, December 22, 2004

Art Unit: 1626 Phone: 272-0707

Serial Number: 10 / 685020

From: Jan Delaval

Location: Biotech-Chem Library

Rem 1A51

Phone: 272-2504

jan.delaval@uspto.gov

Search Notes





Jan Deloval 141014 SEARCH REQUEST FORM

Access DB# ___

for slaw Scien	ntific and Technical	Information Center
Property's Full Name: Kepert	(Ren) Shiss	Examiner #: 7952/ Date: 125/04/
Art Unit: <u>/626</u> Phone Nu Mail Box and Bldg/Room Location:	711/5018	ts Format Preferred (circle): PAPER DISK E-MANE
f more than one search is submit		
Please provide a detailed statement of the se	arch topic, and describe as ywords, synonyms, acrony lat may have a special mea	rms, and registry numbers, and combine with the concept or mining. Give examples or relevant citations, authors, etc, if
Title of invention: Blad	re modulet	
Inventors (please provide full names):	Hemsan	2 2
Earliest Priority Filing Date:		
For Sequence Searches Only Please include appropriate serial number.		parent, child, divisional, or issued patent numbers) along with the
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STAFF USE ONEX	Type of Search	Vendors and cost where applicable
Searcher:	NA Sequence (#)	
Scarcher Phone #: 2204	AA Sequence (#)	•
Searcher Location:	Structure (#)	
Date Searcher Picked Up: 12/22	Bibliographic	
Date Completed: 12/22	Litigation	Lexis/Nexis
Searcher Prep & Review Time:	Fullext	Sequence Systems
Gerical Prop Time:	Patent Family	
Online Time: + 28	Other	Other (specify)

PTO-1590 (8-01)

=> fil reg FILE 'REGISTRY' ENTERED AT 14:51:17 ON 22 DEC 2004 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT. PLEASE SEE "HELP USAGETERMS" FOR DETAILS. COPYRIGHT (C) 2004 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 20 DEC 2004 HIGHEST RN 800365-77-9 DICTIONARY FILE UPDATES: 20 DEC 2004 HIGHEST RN 800365-77-9

TSCA INFORMATION NOW CURRENT THROUGH MAY 21, 2004

Please note that search-term pricing does apply when conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at: http://www.cas.org/ONLINE/DBSS/registryss.html

=> d sta que 127 L23 STR

VAR G1=0/S/N
VAR G2=C/25
VAR G3=0/S
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
GGCAT IS PCY UNS AT 8
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED NUMBER OF NODES IS 12

STEREO ATTRIBUTES: NONE

L25 800109 SEA FILE=REGISTRY ABB=ON PLU=ON C6-C6/ES AND NR>=2 L27 9 SEA FILE=REGISTRY SUB=L25 SSS FUL L23 100.0% PROCESSED 27 ITERATIONS SEARCH TIME: 00.00.01

9 ANSWERS

=> d his (FILE 'HOME' ENTERED AT 14:29:33 ON 22 DEC 2004) SET COST OFF FILE 'HCAPLUS' ENTERED AT 14:29:45 ON 22 DEC 2004 L11 S (US20040092559 OR US6670386 OR US20030055094)/PN OR (US2001-3 FILE 'REGISTRY' ENTERED AT 14:30:55 ON 22 DEC 2004 FILE 'HCAPLUS' ENTERED AT 14:30:55 ON 22 DEC 2004 SET SMARTSELECT ON L2SEL L1 1- RN : 97 TERMS SET SMARTSELECT OFF FILE 'REGISTRY' ENTERED AT 14:30:55 ON 22 DEC 2004 97 S L2 L3 63 S L3 AND C6-C6/ES L4L5 6 S L4 AND NC4/ES L6 1 S L5 AND C18H17N3O4 E C18H17N3O4/MF 1 S E3 AND C6-C6/ES AND NC4/ES AND 3/NR L71 S L6, L7 L8 L9 52 S L4 AND NR>=3 L10 51 S L9 NOT L8 35 S L10 AND NCNC2-NC4/ES L1116 S L10 NOT L11 L12L13 4 S L12 AND NCNC2-NC5/ES 12 S L12 NOT L13 L14 L15 7 S L14 NOT L5 7 S L15 NOT L8 L16 STR L17 0 S L17 L18 L19 STR L17 L20 0 S L19 L21 · STR L19 L22 0 S L21 L23 STR L21 L24 1 S L23 800109 S C6-C6/ES AND NR>=2 L25 L26 1 S L23 SAM SUB=L25

3 S L28 AND (NC2/ES OR C20H20N2O3 OR C29H27N3O5)

FILE 'HCAOLD' ENTERED AT 14:50:33 ON 22 DEC 2004

9 S L23 FUL SUB=L25

8 S L27 NOT L8, L16

5 S L28 NOT L29

SAV L27 SHIAO685/A

SAV L30 SHIAO685A/A

L31 0 S L8 L32 0 S L30

L27

L28

L29

L30

FILE 'HCAPLUS' ENTERED AT 14:50:41 ON 22 DEC 2004

L33 2 S L8 L34 2 S L30 L35 3 S L33,L34

FILE 'USPATFULL' ENTERED AT 14:50:59 ON 22 DEC 2004

L36 2 S L8 L37 5 S L30 L38 5 S L36,L37

FILE 'REGISTRY' ENTERED AT 14:51:17 ON 22 DEC 2004

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L8 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2004 ACS on STN

RN 496841-10-2 REGISTRY

CN L-Proline, 1-[[(4-cyano-1-naphthalenyl)amino]carbonyl]-3-hydroxy-, methyl ester, (3R)- (9CI) (CA INDEX NAME)

OTHER NAMES:

CN (2S,3R)-1-[(4-Cyanonaphthalen-1-yl)carbamoyl]-3-hydroxypyrrolidine-2-carboxylic acid methyl ester

FS STEREOSEARCH

MF C18 H17 N3 O4

SR CA

LC STN Files: CA, CAPLUS, TOXCENTER, USPATZ, USPATFULL

DT.CA CAplus document type: Patent

RL.P Roles from patents: PREP (Preparation); RACT (Reactant or reagent)

Absolute stereochemistry.

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

2 REFERENCES IN FILE CA (1907 TO DATE)

2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 141:28605

REFERENCE 2: 138:153537

=> d ide can 130 tot

L30 ANSWER 1 OF 5 REGISTRY COPYRIGHT 2004 ACS on STN

RN 496840-99-4 REGISTRY

CN L-Proline, 1-[[(4-nitro-1-naphthalenyl)amino]carbonyl]-, methyl ester (9CI) (CA INDEX NAME)

OTHER NAMES:

CN (2S)-1-[[(4-Nitro-1-naphthalenyl)amino]carbonyl]-2-pyrrolidinecarboxylic acid methyl ester

FS STEREOSEARCH

MF C17 H17 N3 O5

SR CA

LC STN Files: CA, CAPLUS, TOXCENTER, USPAT2, USPATFULL

DT.CA CAplus document type: Patent

RL.P Roles from patents: PREP (Preparation); RACT (Reactant or reagent)

Absolute stereochemistry.

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 138:153537

L30 ANSWER 2 OF 5 REGISTRY COPYRIGHT 2004 ACS on STN

RN 393790-64-2 REGISTRY

CN 1-Pyrrolidinecarboxamide, 4-mercapto-N-1-naphthalenyl-2-[[(2,4,5-tri-fluorophenyl)methoxy]methyl]--, (2S,4R)---(9CI)--- (CA-INDEX-NAME)

FS STEREOSEARCH

MF C23 H21 F3 N2 O2 S

SR CA

LC STN Files: CA, CAPLUS, USPAT7, USPATFULL

DT.CA CAplus document type: Patent

RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES (Uses)

Absolute stereochemistry.

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 136:151068

L30 ANSWER 3 OF 5 REGISTRY COPYRIGHT 2004 ACS on STN

RN 393790-63-1 REGISTRY

CN 1-Pyrrolidinecarboxamide, 4-mercapto-N-2-naphthalenyl-2-[[(2,4,5-trifluorophenyl)methoxy]methyl]-, (2S,4R)- (9CI) (CA INDEX NAME)

FS STEREOSEARCH

MF C23 H21 F3 N2 O2 S

SR CA

0

0

LC STN Files: CA, CAPLUS, USPAT2, USPATFULL

DT.CA CAplus document type: Patent

RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES (Uses)

Absolute stereochemistry.

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 136:151068

L30 ANSWER 4 OF 5 REGISTRY COPYRIGHT 2004 ACS on STN

RN 393790-61-9 REGISTRY

CN 1-Pyrrolidinecarboxamide, 4-mercapto-N-1-naphthalenyl-2-[(phenylmethoxy)methyl]-, (2S,4R)- (9CI) (CA INDEX NAME)

FS STEREOSEARCH

MF C23 H24 N2 O2 S

SR CA

LC STN Files: CA, CAPLUS, USPATZ, USPATFULL

DT.CA CAplus document type: Patent

RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES (Uses)

Absolute stereochemistry.

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 136:151068

L30 ANSWER 5 OF 5 REGISTRY COPYRIGHT 2004 ACS on STN

RN 393790-60-8 REGISTRY

CN 1-Pyrrolidinecarboxamide, 4-mercapto-N-2-naphthalenyl-2-[(phenylmethoxy)methyl]-, (2S,4R)- (9CI) (CA INDEX NAME)

FS STEREOSEARCH

MF C23 H24 N2 O2 S

SR CA

LC STN Files: CA, CAPLUS, USPAT2, USPATFULL

DT.CA CAplus document type: Patent

RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES (Uses)

Absolute stereochemistry.

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 136:151068

=> fil hcaplus FILE 'HCAPLUS' ENTERED AT 14:51:31 ON 22 DEC 2004 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT. PLEASE SEE "HELP USAGETERMS" FOR DETAILS. COPYRIGHT (C) 2004 AMERICAN CHEMICAL SOCIETY (ACS)

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FILE COVERS 1907 - 22 Dec 2004 VOL 141 ISS 26 FILE LAST UPDATED: 21 Dec 2004 (20041221/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

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L35 ANSWER 1 OF 3 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 2004:452960 HCAPLUS

DN 141:28605

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ED
    Entered STN: 04 Jun 2004
    Open chain prolyl urea-related modulators of androgen receptor function
TI
    therapeutic use for nuclear hormone receptor-associated conditions
IN
    Hamann, Lawrence G.; Augeri, David J.; Manfredi, Mark C.
    Bristol-Myers Squibb Company, USA
PΑ
    PCT Int. Appl., 57 pp.
SO
    CODEN: PIXXD2
DT
    Patent
LA
    English
IC
    ICM A61K
CC
    63-5 (Pharmaceuticals)
FAN.CNT 1
    PATENT NO.
                     KIND DATE
                                       APPLICATION NO.
                                                            DATE
                      ____
    WO 2004045518
                      A2 20040603
                                       WO 2003-US36331
                                                            20031113
ΡI
                      A3 20041007
    WO 2004045518
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            CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE,
            GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK,
            LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ,
            OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,
            TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
        RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ,
            BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE,
            ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK,
            TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
                            20021115
PRAI US 2002-426694P
                       P
CLASS
               CLASS PATENT FAMILY CLASSIFICATION CODES
PATENT NO.
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WO 2004045518 ICM A61K
   MARPAT 141:28605
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GI
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- The invention provides for a pharmaceutical composition capable of modulating the androgen receptor comprising a compound of formula (I), wherein R1, R2 and R3 are groups consisting of hydrogen (H), alkyl, or substituted alkyl etc; G is a mono- or polycyclic ring system; X is a linking group selected from the group consisting of NR4 and CHR4; Y is selected from the group consisting of oxygen (O), NR4, NOR4 and sulfur (S); Z is oxygen (-O-) or NR4. Further provided are methods of using such compds. for the treatment of nuclear hormone receptor-associated conditions, such as age related diseases, for example sarcopenia, and also provided are pharmaceutical compns. containing such compds.
- ST prolyl urea related modulator androgen receptor therapy; nuclear hormone receptor assocd condition therapy
- IT Aging, animal

(-related functional decline; open chain prolyl urea-related modulators of androgen receptor function therapeutic use for nuclear hormone receptor-associated conditions)

IT Muscle, disease

(atrophy; open chain prolyl urea-related modulators of androgen

receptor function therapeutic use for nuclear hormone receptor-associated conditions)

IT Heart, disease

(cardiac syndrome X; open chain prolyl urea-related modulators of androgen receptor function therapeutic use for nuclear hormone receptor-associated conditions)

IT Glycosides

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) (cardiac; open chain prolyl urea-related modulators of androgen receptor function therapeutic use for nuclear hormone receptor-associated conditions)

IT Drug delivery systems

(carriers; open chain prolyl urea-related modulators of androgen receptor function therapeutic use for nuclear hormone receptor-associated conditions)

IT Glucocorticoids

RL: BSU (Biological study, unclassified); BIOL (Biological study) (catabolic side effect of; open chain prolyl urea-related modulators of androgen receptor function therapeutic use for nuclear hormone receptor-associated conditions)

IT Fatique, biological

(chronic fatigue syndrome; open chain prolyl urea-related modulators of androgen receptor function therapeutic use for nuclear hormone receptor-associated conditions)

IT Mental disorder

(cognitive, reduced function; open chain prolyl urea-related modulators of androgen receptor function therapeutic use for nuclear hormone receptor-associated conditions)

IT Diabetes mellitus

(complication; open chain prolyl urea-related modulators of androgen receptor function therapeutic use for nuclear hormone receptor-associated conditions)

IT Mental disorder

(depression; open chain prolyl urea-related modulators of androgen receptor function therapeutic use for nuclear hormone receptor-associated conditions)

IT Metabolism, animal

(disorder, chronic catabolic state; open chain prolyl urea-related modulators of androgen receptor function therapeutic use for nuclear hormone receptor-associated conditions)

IT Behavior

(disorder, nervousness, irritability; open chain prolyl urea-related modulators of androgen receptor function therapeutic use for nuclear hormone receptor-associated conditions)

IT Cognition

(disorder, reduced function; open chain prolyl urea-related modulators of androgen receptor function therapeutic use for nuclear hormone receptor-associated conditions)

IT Appetite

(disorder; open chain prolyl urea-related modulators of androgen receptor function therapeutic use for nuclear hormone receptor-associated conditions)

IT Osteoporosis

(drug for; open chain prolyl urea-related modulators of androgen receptor function therapeutic use for nuclear hormone receptor-associated conditions)

IT Bone, disease

(fracture, repair; open chain prolyl urea-related modulators of androgen receptor function therapeutic use for nuclear hormone receptor-associated conditions)

IT Disease, animal

(frailty; open chain prolyl urea-related modulators of androgen receptor function therapeutic use for nuclear hormone receptor-associated

conditions)

IT Reproductive tract, disease

(hypogonadism; open chain prolyl urea-related modulators of androgen receptor function therapeutic use for nuclear hormone receptor-associated conditions)

IT Disease, animal

(lipodistrophy; open chain prolyl urea-related modulators of androgen receptor function therapeutic use for nuclear hormone receptor-associated conditions)

IT Disease, animal

(long-term critical illness; open chain prolyl urea-related modulators of androgen receptor function therapeutic use for nuclear hormone receptor-associated conditions)

IT Contraceptives

(male; open chain prolyl urea-related modulators of androgen receptor function therapeutic use for nuclear hormone receptor-associated conditions)

IT Disease, animal

(metabolic syndrome X; open chain prolyl urea-related modulators of androgen receptor function therapeutic use for nuclear hormone receptor-associated conditions)

IT Thyroid hormones

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(mimetic; open chain prolyl urea-related modulators of androgen
receptor function therapeutic use for nuclear hormone receptor-associated
conditions)

IT Progesterone receptors

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(modulator; open chain prolyl urea-related modulators of androgen
receptor function therapeutic use for nuclear hormone receptor-associated
conditions)

IT Muscle, disease

(muscle loss following elective surgery; open chain prolyl urea-related modulators of androgen receptor function therapeutic use for nuclear hormone receptor-associated conditions)

IT Anabolic agents

Anti-inflammatory agents

Antidepressants

Antidiabetic agents

Antihypertensives

Antiobesity agents

Anxiolytics

Cachexia

Obesity

Selective estrogen receptor modulators

Stress, biological

(open chain prolyl urea-related modulators of androgen receptor function therapeutic use for nuclear hormone receptor-associated conditions)

IT Androgen receptors

RL: BSU (Biological study, unclassified); BIOL (Biological study) (open chain prolyl urea-related modulators of androgen receptor function therapeutic use for nuclear hormone receptor-associated conditions)

IT Estrogens

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) (open chain prolyl urea-related modulators of androgen receptor function therapeutic use for nuclear hormone receptor-associated conditions)

IT Growth factors, animal

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) (open chain prolyl urea-related modulators of androgen receptor function therapeutic use for nuclear hormone receptor-associated

conditions)

IT Bone, disease

(reduced bone d. or growth; open chain prolyl urea-related modulators of androgen receptor function therapeutic use for nuclear hormone receptor-associated conditions)

IT Muscle, disease

(reduced strength and function; open chain prolyl urea-related modulators of androgen receptor function therapeutic use for nuclear hormone receptor-associated conditions)

IT Growth disorders, animal

(retarded; open chain prolyl urea-related modulators of androgen receptor function therapeutic use for nuclear hormone receptor-associated conditions)

IT Muscle

(sarcopenia; open chain prolyl urea-related modulators of androgen receptor function therapeutic use for nuclear hormone receptor-associated conditions)

IT Chemotherapy

(side effect; open chain prolyl urea-related modulators of androgen receptor function therapeutic use for nuclear hormone receptor-associated conditions)

IT Fatigue, biological

(syndrome; open chain prolyl urea-related modulators of androgen receptor function therapeutic use for nuclear hormone receptor-associated conditions)

IT Disease, animal

(wasting; open chain prolyl urea-related modulators of androgen receptor function therapeutic use for nuclear hormone receptor-associated conditions)

IT 121-44-8, Triethylamine, reactions

RL: RCT (Reactant); RACT (Reactant or reagent)
(TEA; open chain prolyl urea-related modulators of androgen receptor function therapeutic use for nuclear hormone receptor-associated conditions)

IT 57-88-5, Cholesterol, biological studies

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(lowering agent; open chain prolyl urea-related modulators of androgen
receptor function therapeutic use for nuclear hormone receptor-associated
conditions)

IT 7732-18-5, Water, uses

RL: NUU (Other use, unclassified); USES (Uses)
(open chain prolyl urea-related modulators of androgen receptor function therapeutic use for nuclear hormone receptor-associated conditions)

IT 75-03-6, Iodoethane 75-44-5, Phosgene 79-22-1, Methyl chloroformate 109-72-8, Butyl lithium, reactions 144-55-8, Carbonic acid monosodium 320-51-4, 4-Chloro-3-(trifluoromethyl)aniline salt, reactions 544-92-3, Copper cyanide 567-35-1, cis-3-Hydroxyproline 1892-57-5, 3282-30-2, Pivaloyl chloride 2592-95-2, HOBT 4111-54-0, 2-Propanamine, N-(1-methylethyl)-, lithium salt 6674-22-2, DBU 7087-68-5, Diisopropylethylamine 36062-93-8 68634-82-2 496841-08-8 RL: RCT (Reactant); RACT (Reactant or reagent) (open chain prolyl urea-related modulators of androgen receptor

(open chain prolyl urea-related modulators of androgen receptor function therapeutic use for nuclear hormone receptor-associated conditions)

IT 13691-92-4P 14311-32-1P 488713-30-0P 488713-31-1P 496841-05-5P 496841-10-2P 697228-47-0P 697228-48-1P 697228-49-2P 697228-50-5P 697228-51-6P 697228-52-7P 697228-53-8P 697228-54-9P RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(open chain prolyl urea-related modulators of androgen receptor function therapeutic use for nuclear hormone receptor-associated conditions)

IT 496841-10-2P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(open chain prolyl urea-related modulators of androgen receptor function therapeutic use for nuclear hormone receptor-associated conditions)

RN 496841-10-2 HCAPLUS

CN L-Proline, 1-[[(4-cyano-1-naphthalenyl)amino]carbonyl]-3-hydroxy-, methyl ester, (3R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L35 ANSWER 2 OF 3 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 2003:117794 HCAPLUS

DN 138:153537

ED Entered STN: 14 Feb 2003

TI Preparation of imidazole-containing heterobicyclic modulators of androgen receptor function

IN Sun, Chongqing; Robl, Jeffrey A.; Salvati, Mark E.; Wang, Tammy; Hamann, Lawrence; Augeri, David

PA Bristol-Myers Squibb Company, USA

SO PCT Int. Appl., 99 pp. CODEN: PIXXD2

DT Patent

LA English

IC ICM C07D207-09

ICS C07D211-04; C07D235-02; A61K031-40; A61K031-4184; A61K031-4188

CC 28-9 (Heterocyclic Compounds (More Than One Hetero Atom)) Section cross-reference(s): 1, 2

FAN.CNT 1

PAIN.	CNI	Ŧ																	
	PATENT NO.						KIND DATE			7	APPL	ICAT:		DATE					
ΡI	WO 2003011824					A1 20030213			1	WO 2	002-1		20020731						
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CLASS
 PATENT NO.
                 CLASS
                        PATENT FAMILY CLASSIFICATION CODES
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 WO 2003011824
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                        C07D207-09
                        C07D211-04; C07D235-02; A61K031-40; A61K031-4184;
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                        A61K031-4188
US 2003055094
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                        C07D471/04+235C+221C; C07D487/04+235C+209C;
                        C07D487/04+241C+235C; C07D513/04+277C+235C
                        C07D471/04+235C+221C; C07D487/04+235C+209C;
US 2004092559
                 ECLA
                        C07D487/04+241C+235C; C07D513/04+277C+235C
     MARPAT 138:153537
OS
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AB The invention provides imidazole-containing heterobicyclic compds. (shown as I, including all prodrug esters, pharmaceutically acceptable salts and stereoisomers thereof; variables defined below; e.g. tetrahydro-2-(4-nitro-1-naphthalenyl)imidazo[1,5-a]pyridine-1,3(2H,5H)-dione), methods of using such compds. for the treatment of nuclear hormone receptor-associated conditions, such as age related diseases, for example sarcopenia, and pharmaceutical compns. containing such compds. Pharmacol. assay procedures are described but results for I are not reported. For I: R1 = H, cyano, nitro, halo, heterocyclo, OR4, CO2R5, CONHR5, COR5, S(O)mR5, SO2NR5R5', NHCOR5 and NHSO2R5; R2 = H, alkyl or substituted alkyl, (un) substituted alkenyl, (un)substituted arylalkyl, CO2R5, CONR5R5' and CH2OR5; R3 = H, (un) substituted alkyl, (un) substituted alkenyl, (un) substituted alkynyl, (un) substituted cycloalkyl, (un) substituted arylalkyl, (un) substituted heterocycloalkyl, (un) substituted aryl, (un) substituted heteroaryl, halo, cyano, NHCOR5, NHCO2R5, NHCONR5R5', NHSO2R5 and OR4. R4 = H, (un) substituted alkyl, CHF2, CF3 and COR5; R5 and R5' = H, (un) substituted alkyl, (un) substituted alkenyl, (un) substituted alkynyl, (un) substituted cycloalkyl, (un) substituted heterocycloalkyl, (un) substituted arylalkyl, (un) substituted aryl, (un) substituted heteroaryl and cyano; W = (CR6R6')m, CHOH(CR6R6')m, CO(CR6R6')m and C:NOR4(CR6R6')m. R6 and R6' = H, (un) substituted alkyl, (un) substituted alkenyl, (un) substituted alkynyl, (un) substituted cycloalkyl, (un) substituted arylalkyl, (un) substituted heterocycloalkyl, (un) substituted aryl, (un) substituted heteroaryl, halo, cyano, NHCOR5, NHCO2R5, NHCONR5R5', NHSO2R5 and OR4; X = methylene, O,

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Bone, disease

S(O)m, NCOR5, NCO2R5, NCONHR5R5', NSO2NR5R5'; Y = O, S and H2; E = C:Z, CHR5, SO2, P(O)R5 and P(O)OR5; Z = O, S, NH and NR5; A and B = H, halo, cyano, nitro, (un) substituted alkyl and OR4; m = 0-2; and n = 1-2;. Although the methods of preparation are not claimed, 42 example prepns. are included. imidazole heterobicyclic compd prepn androgen receptor modulator Fatigue, biological (acute fatique syndrome following elective surgery; preparation of imidazole-containing heterobicyclic modulators of androgen receptor function with therapeutic uses) Osteoporosis (anti-osteoporosis agents; combined with imidazole-containing heterobicyclic modulators of androgen receptor function for therapy or prophylaxis) Muscle, disease (atrophy; preparation of imidazole-containing heterobicyclic modulators of androgen receptor function with therapeutic uses) Glycosides RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) (cardiac; combined with imidazole-containing heterobicyclic modulators of androgen receptor function for therapy or prophylaxis) Glucocorticoids RL: BSU (Biological study, unclassified); BIOL (Biological study) (catabolic side effects; preparation of imidazole-containing heterobicyclic modulators of androgen receptor function with therapeutic uses) Fatigue, biological (chronic fatigue syndrome; preparation of imidazole-containing heterobicyclic modulators of androgen receptor function with therapeutic uses) Mental disorder (cognitive; preparation of imidazole-containing heterobicyclic modulators of androgen receptor function with therapeutic uses) Anabolic agents Anti-inflammatory agents Anticholesteremic agents Antidepressants Antidiabetic agents Antihypertensives Antiobesity agents Anxiolytics (combined with imidazole-containing heterobicyclic modulators of androgen receptor function for therapy or prophylaxis) Estrogens Growth factors, animal RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) (combined with imidazole-containing heterobicyclic modulators of androgen receptor function for therapy or prophylaxis) Mental disorder (depression; preparation of imidazole-containing heterobicyclic modulators androgen receptor function with therapeutic uses) Metabolism, animal (disorder, catabolic, chronic catabolic state; preparation of imidazole-containing heterobicyclic modulators of androgen receptor function with therapeutic uses) Appetite Cognition (disorder; preparation of imidazole-containing heterobicyclic modulators of androgen receptor function with therapeutic uses) Drug delivery systems (for imidazole-containing heterobicyclic modulators of androgen receptor function)

(fracture, repair; preparation of imidazole-containing heterobicyclic modulators of androgen receptor function with therapeutic uses) Reproductive tract, disease IT (hypogonadism; preparation of imidazole-containing heterobicyclic modulators of androgen receptor function with therapeutic uses) Mental disorder TT (irritability; preparation of imidazole-containing heterobicyclic modulators of androgen receptor function with therapeutic uses) IT Contraceptives (male, contraception; preparation of imidazole-containing heterobicyclic modulators of androgen receptor function with therapeutic uses) IT Disease, animal (metabolic syndrome X; preparation of imidazole-containing heterobicyclic modulators of androgen receptor function with therapeutic uses) IT Thyroid gland (mimetics; combined with imidazole-containing heterobicyclic modulators of androgen receptor function for therapy or prophylaxis) Progesterone receptors IT RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) (modulators; combined with imidazole-containing heterobicyclic modulators of androgen receptor function for therapy or prophylaxis) IT Androgen receptors RL: BSU (Biological study, unclassified); BIOL (Biological study) (modulators; preparation of imidazole-containing heterobicyclic modulators of androgen receptor function) IT Hormone receptors RL: BSU (Biological study, unclassified); BIOL (Biological study) (nuclear; preparation of imidazole-containing heterobicyclic modulators of androgen receptor function) Human IT (preparation of imidazole-containing heterobicyclic modulators of androgen receptor function) IT Anxiety Cachexia Cognition enhancers Diabetes mellitus Lipodystrophy Obesity Stress, animal (preparation of imidazole-containing heterobicyclic modulators of androgen receptor function with therapeutic uses) TT Bone, disease (reduced d. or growth; preparation of imidazole-containing heterobicyclic modulators of androgen receptor function with therapeutic uses) Growth disorders, animal IT (retarded; preparation of imidazole-containing heterobicyclic modulators of androgen receptor function with therapeutic uses) IT . Muscle, disease (sarcopenia; preparation of imidazole-containing heterobicyclic modulators of androgen receptor function with therapeutic uses) Estrogen receptors IT RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) (selective modulators; combined with imidazole-containing heterobicyclic modulators of androgen receptor function for therapy or prophylaxis) IT Chemotherapy (side effects; preparation of imidazole-containing heterobicyclic modulators of

androgen receptor function with therapeutic uses)

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ΙT
     Disease, animal
        (wasting; preparation of imidazole-containing heterobicyclic modulators of
        androgen receptor function with therapeutic uses)
IT
     Muscle, disease
        (weakness; preparation of imidazole-containing heterobicyclic modulators of
        androgen receptor function with therapeutic uses)
IT
     9002-72-6, Growth hormone
     RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (and secretagogues; combined with imidazole-containing heterobicyclic
        modulators of androgen receptor function for therapy or prophylaxis)
                                                58-22-0, Testosterone
     57-83-0, Progesterone, biological studies
TT
     9002-64-6, Parathyroid hormone
                                    13598-36-2D, Phosphonic acid,
     bisphosphonates
     RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (combined with imidazole-containing heterobicyclic modulators of androgen
        receptor function for therapy or prophylaxis)
                    496841-12-4P
TΤ
     496841-03-3P
                                   496841-25-9P, (7AS)-4-(1,3-Dioxo-5,7a-
     dihydro-1H-pyrrolo[1,2-c]imidazol-2-yl)naphthalene-1-carbonitrile
     496841-32-8P, (7R,7AS)-4-(7-hydroxy-7-methyl-1,3-
     dioxotetrahydropyrrolo[1,2-c]imidazol-2-yl)naphthalene-1-carbonitrile
     RL: PAC (Pharmacological activity); PEP (Physical, engineering or chemical
     process); PYP (Physical process); SPN (Synthetic preparation); THU
     (Therapeutic use); BIOL (Biological study); PREP (Preparation); PROC
     (Process); USES (Uses)
        (drug candidate, chromatog. resolution; preparation of imidazole-containing
        heterobicyclic modulators of androgen receptor function)
IT
     496841-46-4P
     RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic
     preparation); THU (Therapeutic use); BIOL (Biological study); PREP
     (Preparation); RACT (Reactant or reagent); USES (Uses)
        (drug candidate, chromatog. resolution; preparation of imidazole-containing
        heterobicyclic modulators of androgen receptor function)
     496841-06-6P, (7R,7AS)-4-[Tetrahydro-7-hydroxy-1,3-dioxo-1H-pyrrolo[1,2-
IT
     c]imidazol-2(3H)-yl]-1-naphthalenecarbonitrile 496841-11-3P,
     (7S,7AR)-4-[Tetrahydro-7-hydroxy-1,3-dioxo-1H-pyrrolo[1,2-c]imidazol-2(3H)-
     yl]-1-naphthalenecarbonitrile 496841-27-1P, (7AR)-4-(1,3-Dioxo-5,7a-
     dihydro-1H-pyrrolo[1,2-c]imidazol-2-yl)naphthalene-1-carbonitrile
     RL: PAC (Pharmacological activity); PUR (Purification or recovery); RCT
     (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL
     (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES
     (Uses)
        (drug candidate; preparation of imidazole-containing heterobicyclic
modulators
        of androgen receptor function)
     496841-13-5P, (7S,7AR)-Tetrahydro-7-hydroxy-2-(4-nitro-1-naphthalenyl)-1H-
     pyrrolo[1,2-c]imidazole-1,3(2H)-dione 496841-14-6P, (7R,7AS)-Tetrahydro-
     7-hydroxy-2-(4-nitro-1-naphthalenyl)-1H-pyrrolo[1,2-c]imidazole-1,3(2H)-
            496841-34-0P, (7S, 7AR)-4-(7-Hydroxy-7-methyl-1, 3-
     dioxotetrahydropyrrolo[1,2-c]imidazol-2-yl)naphthalene-1-carbonitrile
     496841-47-5P, (8R,8AS)-4-(8-Hydroxy-1,3-dioxohexahydroimidazo[1,5-
     a]pyridin-2-yl)naphthalene-1-carbonitrile 496841-48-6P,
     (8S, 8AR) -4-(8-Hydroxy-1, 3-dioxohexahydroimidazo[1,5-a]pyridin-2-
     yl)naphthalene-1-carbonitrile
     RL: PAC (Pharmacological activity); PUR (Purification or recovery); SPN
     (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study);
     PREP (Preparation); USES (Uses)
        (drug candidate; preparation of imidazole-containing heterobicyclic
modulators
        of androgen receptor function)
     496841-49-7P, 2-(4-Cyanonaphthalen-1-yl)-1,3-dioxohexahydroimidazo[1,5-
TT
     a]pyrazine-7-carboxylic acid tert-butyl ester 496841-50-0P,
     4-(1,3-Dioxohexahydroimidazo[1,5-a]pyrazin-2-yl)naphthalene-1-carbonitrile
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hydrochloride

RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses) (drug candidate; preparation of imidazole-containing heterobicyclic modulators of androgen receptor function) 496840-96-1P, Tetrahydro-2-(4-nitro-1-naphthalenyl)imidazo[1,5-a]pyridine-1,3(2H,5H)-dione 496840-97-2P, Tetrahydro-2-(4-nitro-1-naphthalenyl)-1Hpyrrolo[1,2-c]imidazole-1,3(2H)-dione 496841-00-0P 496841-01-1P, (6R) -Tetrahydro-6-hydroxy-2-(4-nitro-1-naphthalenyl)-1H-pyrrolo[1,2c]imidazole-1,3(2H)-dione 496841-02-2P, (6R)-Tetrahydro-2-(4-nitro-1naphthalenyl) -6-(phenylmethoxy) -1H-pyrrolo[1,2-c]imidazole-1,3(2H)-dione 496841-16-8P 496841-18-0P 496841-19-1P 496841-20-4P 496841-15-7P 496841-21-5P, 4-(5,7-Dioxodihydroimidazo[1,5-c]thiazol-6-yl)naphthalene-1-496841-22-6P 496841-23-7P 496841-24-8P, carbonitrile 4-(1,3-Dioxo-5,6-dihydro-1H-pyrrolo[1,2-c]imidazol-2-yl)naphthalene-1-496841-28-2P, (7AR)-4-(6,7-Dihydroxy-1,3carbonitrile dioxotetrahydropyrrolo[1,2-c]imidazol-2-yl)naphthalene-1-carbonitrile 496841-29-3P, (7AS)-4-(6,7-Dihydroxy-1,3-dioxotetrahydropyrrolo[1,2c]imidazol-2-yl)naphthalene-1-carbonitrile 496841-30-6P, (7S,7AR)-4-(7-Hydroxy-7a-methyl-1,3-dioxotetrahydropyrrolo[1,2-c]imidazol-2-yl)naphthalene-1-carbonitrile 496841-31-7P, (7R,7AS)-4-(7-Hydroxy-7amethyl-1,3-dioxotetrahydropyrrolo[1,2-c]imidazol-2-yl)naphthalene-1-496841-35-1P, (7R,7AS)-4-(7-Hydroxy-1-oxo-3carbonitrile thioxotetrahydropyrrolo[1,2-c]imidazol-2-yl)naphthalene-1-carbonitrile 496841-37-3P, (3R,7S,7AS)-4-(3-tert-Butyl-7-hydroxy-1oxotetrahydropyrrolo[1,2-c]imidazol-2-yl)naphthalene-1-carbonitrile 496841-40-8P, (3R,7S,7AS)-4-(7-Hydroxy-1-oxo-3-phenyltetrahydropyrrolo[1,2-496841-41-9P, c]imidazol-2-yl)naphthalene-1-carbonitrile (3S,7S,7AS)-4-(7-Hydroxy-1-oxo-3-phenyltetrahydropyrrolo[1,2-c]imidazol-2yl)naphthalene-1-carbonitrile 496841-42-0P, (3R,6R,7AS)-4-(3-tert-Butyl-6-hydroxy-1-oxotetrahydropyrrolo[1,2-c]imidazol-2-yl)naphthalene-1carbonitrile 496841-51-1P, 4-(7-Methanesulfonyl-1,3dioxohexahydroimidazo[1,5-a]pyrazin-2-yl)naphthalene-1-carbonitrile 496841-52-2P, 2-(4-Cyanonaphthalen-1-yl)-1,3-dioxohexahydroimidazo[1,5a]pyrazine-7-carboxylic acid methyl ester 496841-53-3P, (7R,7AR)-4-(7-Hydroxy-3-oxotetrahydropyrrolo[1,2-c]imidazol-2yl)naphthalene-1-carbonitrile 496841-56-6P, (7S,7AS)-4-(7-Hydroxy-3oxotetrahydropyrrolo[1,2-c]imidazol-2-yl)naphthalene-1-carbonitrile 496841-58-8P RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (drug candidate; preparation of imidazole-containing heterobicyclic modulators of androgen receptor function) 630-19-3, Pivalaldehyde 776-34-1, 100-52-7, Benzaldehyde, reactions 1-Amino-4-nitronaphthalene 874-24-8, 3-Hydroxypicolinic acid 4298-08-2, trans-3-Hydroxy-L-2298-07-9, 1-Amino-4-bromonaphthalene 15862-72-3 34592-47-7, L-Thioproline 40126-30-5, cis-4-Hydroxy-L-proline methyl ester hydrochloride 40216-83-9, trans-4-Hydroxy-L-proline methyl ester hydrochloride 54631-81-1, 1-(tert-Butoxycarbonyl)-(R)-4-benzyloxy-L-proline 58728-64-6, 4-Amino-1-naphthalenecarbonitrile 66831-17-2, trans-4-Benzyloxy-L-proline methyl ester hydrochloride 74844-93-2, N-Boc-3,4-dehydro-L-proline methyl ester 438631-75-5, 4-tert-Butoxycarbonyl-2piperazinecarboxylic acid tert-butyl ester RL: RCT (Reactant); RACT (Reactant or reagent) (preparation of imidazole-containing heterobicyclic modulators of androgen receptor function) 341-95-7P, 4-Nitro-1-naphthyldiazonium tetrafluoroborate 1591-96-4P, IT 4-Bromo-1-naphthalene isocyanate 2133-40-6P, L-Proline methyl ester hydrochloride 2577-48-2P, L-Proline methyl ester 35616-00-3P,

```
4-Nitro-1-naphthalenecarboxylic acid methyl ester
                                                        54528-16-4P,
    4-Nitro-1-naphthalene isocyanate 60667-24-5P, Thiazolidine-4-carboxylic
    acid methyl ester
                        130966-46-0P, (2S, 3R) -N-tert-Butoxycarbonyl-3-hydroxy-
    2-pyrrolidinecarboxylic acid methyl ester
                                               156045-82-8P,
     (2S,3S)-3-(tert-Butyldimethylsilanyloxy)pyrrolidine-1,2-dicarboxylic acid
     1-tert-butyl ester
                        157252-24-9P, 4-Amino-1-naphthalenecarboxylic acid
                   179686-58-9P, [tert-Butoxycarbonyl(3-oxobutyl)amino]acetic
    methyl ester
                       184046-78-4P, (2S,3S)-N-tert-Butoxycarbonyl-3-hydroxy-2-
    acid ethyl ester
    pyrrolidinecarboxylic acid methyl ester
                                              187039-57-2P,
     (2S,3S)-3-Hydroxypyrrolidine-1,2-dicarboxylic acid 1-tert-butyl ester
                                                             194297-99-9P,
    194297-98-8P, cis-3-Hydroxypiperidine-2-carboxylic acid
    cis-3-Hydroxypiperidine-2-carboxylic acid methyl ester hydrochloride
    213131-32-9P, Methyl trans-3-hydroxy-L-prolinate hydrochloride
    496840-99-4P, (2S)-1-[[(4-Nitro-1-naphthalenyl)amino]carbonyl]-2-
    pyrrolidinecarboxylic acid methyl ester
                                              496841-04-4P,
     (2S,3S)-3-Hydroxy-2-pyrrolidinecarboxylic acid methyl ester
                                                     496841-07-7P,
     496841-05-5P, 4-Cyano-1-naphthalene isocyanate
     (2S,3R)-N-tert-Butoxycarbonyl-3-benzoyloxy-2-pyrrolidinecarboxylic acid
                  496841-08-8P, (2S,3R)-3-Hydroxy-2-pyrrolidinecarboxylic
    methyl ester
                       496841-09-9P, (2S,3R)-3-Hydroxy-2-
    acid methyl ester
    pyrrolidinecarboxylic acid methyl ester trifluoroacetic acid salt
     496841-10-2P, (2S,3R)-1-[(4-Cyanonaphthalen-1-yl)carbamoyl]-3-
    hydroxypyrrolidine-2-carboxylic acid methyl ester
                                                       496841-17-9P,
     4-Isocyanato-1-naphthalenecarboxylic acid methyl ester
                                                              496841-26-0P,
     3,4-Dehydro-L-proline methyl ester trifluoroacetic acid salt
                   496841-36-2P, 4-Cyano-N-thionyl-1-naphthylamine
     496841-33-9P
     496841-38-4P, (2S,3S)-3-(tert-Butyldimethylsilanyloxy)-2-[(4-
     cyanonaphthalen-1-yl)carbamoyl]pyrrolidine-1-carboxylic acid tert-butyl
            496841-39-5P, (2S,3S)-3-Hydroxypyrrolidine-2-carboxylic acid
    (4-cyanonaphthalen-1-yl)amide 496841-43-1P, (2S,4R)-4-Benzyloxy-2-[(4-
     cyanonaphthalen-1-yl)carbamoyl]pyrrolidine-1-carboxylic acid tert-butyl
            496841-44-2P, (2S,4R)-4-Benzyloxypyrrolidine-2-carboxylic acid
     (4-cyanonaphthalen-1-yl)amide 496841-45-3P, (3R,6R,7AS)-4-(6-Benzyloxy-3-
     tert-butyl-1-oxotetrahydropyrrolo[1,2-c]imidazol-2-yl)naphthalene-1-
                   496841-55-5P, (7R,7AS)-4-(1,7-Dihydroxy-3-
     carbonitrile
     oxotetrahydropyrrolo[1,2-c]imidazol-2-yl)naphthalene-1-carbonitrile
     496841-57-7P, (7S,7AR)-4-(1,7-Dihydroxy-3-oxotetrahydropyrrolo[1,2-
     c]imidazol-2-yl)naphthalene-1-carbonitrile
     RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
     (Reactant or reagent)
        (preparation of imidazole-containing heterobicyclic modulators of androgen
        receptor function)
             THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE.CNT
(1) Gpi Nil Holdings Inc; WO 0146195 A1 2001 HCAPLUS
     496840-99-4P, (2S)-1-[[(4-Nitro-1-naphthalenyl)amino]carbonyl]-2-
    pyrrolidinecarboxylic acid methyl ester 496841-10-2P,
     (2S, 3R) -1-[(4-Cyanonaphthalen-1-yl)carbamoyl]-3-hydroxypyrrolidine-2-
     carboxylic acid methyl ester
     RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
     (Reactant or reagent)
        (preparation of imidazole-containing heterobicyclic modulators of androgen
        receptor function)
     496840-99-4 HCAPLUS
     L-Proline, 1-[[(4-nitro-1-naphthalenyl)amino]carbonyl]-, methyl ester
           (CA INDEX NAME)
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Absolute stereochemistry.

RE

RN

CN

RN 496841-10-2 HCAPLUS

CN L-Proline, 1-[[(4-cyano-1-naphthalenyl)amino]carbonyl]-3-hydroxy-, methyl ester, (3R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L35 ANSWER 3 OF 3 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 2002:90005 HCAPLUS

DN 136:151068

ED Entered STN: 01 Feb 2002

TI Preparation of pyrrolidinethiols and analogs as metalloprotease inhibitors

IN Aebi, Johannes; Bur, Daniel; Chucholowski, Alexander; Dehmlow, Henrietta; Kitas, Eric Argirios; Obst, Ulrike; Wessel, Hans Peter

PA F. Hoffmann-La Roche A.-G., Switz.

SO PCT Int. Appl., 160 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM C07D207-48

ICS C07D207-36; C07D405-12; C07D409-12; C07D413-12; C07D417-12;

C07D401-12; C07D403-06; A61K031-40; A61P009-00

CC 27-10 (Heterocyclic Compounds (One Hetero Atom))

Section cross-reference(s): 1

FAN.CNT 1

THU.	PATENT NO.						D :	DATE			APPLICATION NO.						DATE			
PI	WO 2002008185					A1		20020131		1	WO 2	 001-1		20010710						
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			LS,	LT,	LU,	LV,	MA,	MD,	MG,	MK,	MN,	MW,	MX,	MZ,	NO,	NZ,	PL,	PT,		

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             BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
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PRAI EP 2000-114949
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    US 2003-373622
                          A3 20030225
CLASS
                       PATENT FAMILY CLASSIFICATION CODES
 PATENT NO.
                 CLASS
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                        _______
 WO 2002008185
                 ICM
                        C07D207-48
                        C07D207-36; C07D405-12; C07D409-12; C07D413-12;
                 ICS
                        C07D417-12; C07D401-12; C07D403-06; A61K031-40;
                        A61P009-00
                 FTERM
                        4C063/AA01; 4C063/BB08; 4C063/CC82; 4C063/DD03;
 JP 2004504379
                        4C063/EE01; 4C069/AA12; 4C069/AA23; 4C069/BC14;
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os
    MARPAT 136:151068
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$$R^{1}S$$
 N
 R^{5}
 R^{7}
 R^{7}
 R^{7}

AB Title compds. [e.g., I; R = Z1R3 or SO3H; R1 = H, alkanoyl, aroyl; R3 = alkyl, (hetero)aryl, heterocyclyl, etc.; R4 = H or alkyl; R5 = CH2Z2R2; R2 = aryl(alkyl), ar(o)ylamino, arylsulfonyl, etc.; Z1 = sulfonyl(amino),

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393789-68-9P

CONH, CO2, etc.; Z2 = CH2, O, S, (un) substituted NH] were prepared Thus, e.g., (3R,5S)-1-naphthalene-2-sulfonyl-5-anilinomethylpyrrolidine-3-thiol was prepared Data for biol. activity of title compds. were given. ST pyrrolidinethiol prepn metalloprotease inhibitor; vasoconstriction inhibitor pyrrolidinethiol prepn; zinc hydrolase inhibitor pyrrolidinethiol prepn IT Vasoconstriction (inhibitors; preparation of pyrrolidinethiols and analogs as metalloprotease inhibitors) 138238-81-0, Endothelin converting enzyme ΙT 81669-70-7, Metalloprotease RL: BSU (Biological study, unclassified); BIOL (Biological study) (mediated disorders; treatment; preparation of pyrrolidinethiols and analogs as metalloprotease inhibitors) 393787-20-7P 393787-21-8P 393787-22-9P 393787-23-0P IT 393787-19-4P 393787-25-2P 393787-26-3P 393787-27-4P 393787-28-5P 393787-24-1P 393787-31-0P 393787-32-1P 393787-33-2P 393787-30-9P 393787-29-6P 393787-38-7P 393787-34-3P 393787-36-5P 393787-40-1P 393787-41-2P 393787-42-3P 393787-43-4P 393787-44-5P 393787-45-6P 393787-46-7P 393787-47-8P 393787-48-9P 393787-49-0P 393787-50-3P 393787-51-4P 393787-54-7P 393787-56-9P 393787-52-5P 393787-53-6P 393787-55-8P 393787-58-1P 393787-60-5P 393787-61-6P 393787-59-2P 393787-57-0P 393787-63-8P 393787-65-0P 393787-66-1P 393787-64-9P 393787-62-7P 393787-68-3P 393787-70-7P 393787-71-8P 393787-69-4P 393787-67-2P 393787-73-0P 393787-74-1P 393787-75-2P 393787-76-3P 393787-72-9P 393787-79-6P 393787-81-0P 393787-82-1P 393787-78-5P 393787-80-9P 393787-87-6P 393787-84-3P 393787-85-4P 393787-86-5P 393787-83-2P 393787-90-1P 393787-91-2P 393787-92-3P 393787-89-8P 393787-88-7P 393787-95-6P 393787-96-7P 393787-97-8P 393787-94-5P 393787-93-4P 393787-99-0P 393788-02-8P 393788-04-0P 393788-00-6P 393787-98-9P 393788-08-4P 393788-09-5P 393788-10-8P 393788-11-9P 393788-06-2P 393788-15-3P 393788-12-0P 393788-13-1P 393788-14-2P 393788-16-4P 393788-21-1P 393788-19-7P 393788-20-0P 393788-17-5P 393788-18-6P 393788-27-7P 393788-22-2P 393788-23-3P 393788-24-4P 393788-26-6P 393788-35-7P 393788-30-2P 393788-32-4P 393788-33-5P 393788-28-8P 393788-37-9P 393788-38-0P 393788-39-1P 393788-40-4P 393788-36-8P 393788-43-7P 393788-44-8P 393788-45-9P 393788-41-5P 393788-42-6P 393788-49-3P 393788-46-0P 393788-47-1P 393788-48-2P 393788-50-6P 393788-53-9P 393788-54-0P 393788-55-1P 393788-51-7P 393788-52-8P 393788-57-3P 393788-58-4P 393788-59-5P 393788-60-8P 393788-56-2P 393788-63-1P 393788-64-2P 393788-65-3P 393788-61-9P 393788-62-0P 393788-67-5P 393788-68-6P 393788-69-7P 393788-70-0P 393788-66-4P 393788-75-5P 393788-71-1P 393788-72-2P 393788-73-3P 393788-74-4P 393788-79-9P 393788-77-7P 393788-78-8P 393788-80-2P 393788-76-6P 393788-84-6P 393788-85-7P 393788-86-8P 393788-82-4P 393788-83-5P 393788-90-4P 393788-87-9P 393788-88-0P 393788-89-1P 393788-91-5P 393788-95-9P 393788-92-6P 393788-93-7P 393788-94-8P 393788-96-0P 393788-98-2P 393788-99-3P 393789-00-9P 393789-01-0P 393788-97-1P 393789-05-4P 393789-06-5P 393789-02-1P 393789-03-2P 393789-04-3P 393789-10-1P 393789-11-2P 393789-08-7P 393789-09-8P 393789-07-6P 393789-16-7P 393789-14-5P 393789-15-6P 393789-12-3P 393789-13-4P 393789-21-4P 393789-18-9P 393789-19-0P 393789-20-3P 393789-17-8P 393789-23-6P 393789-24-7P 393789-25-8P 393789-26-9P 393789-22-5P 393789-31-6P 393789-27-0P 393789-28-1P 393789-29-2P 393789-30-5P 393789-35-0P 393789-33-8P 393789-34-9P 393789-36-1P 393789-32-7P 393789-40-7P 393789-38-3P 393789-39-4P 393789-41-8P 393789-37-2P 393789-45-2P 393789-43-0P 393789-44-1P 393789-46-3P 393789-42-9P 393789-48-5P 393789-49-6P 393789-50-9P 393789-51-0P 393789-47-4P 393789-55-4P 393789-52-1P 393789-53-2P 393789-54-3P 393789-56-5P 393789-62-3P 393789-57-6P 393789-59-8P 393789-61-2P 393789-63-4P

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

393789-66-7P

393789-65-6P

393789-67-8P

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(preparation of pyrrolidinethiols and analogs as metalloprotease inhibitors)
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     RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU
     (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES
     (Uses)
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(preparation of pyrrolidinethiols and analogs as metalloprotease inhibitors) 51-35-4, L-Hydroxyproline 64-04-0, Phenethylamine 78-84-2 85-41-6, Phthalimide 85-46-1, 1-Naphthalenesulfonyl chloride 89-99-6, 2-Fluorobenzylamine 93-11-8, 2-Naphthalenesulfonyl chloride 98-03-3, 2-Thiophenecarboxaldehyde 98-59-9, p-Toluenesulfonyl chloride 98-88-4, 98-89-5, Cyclohexanecarboxylic acid Benzoyl chloride 100-39-0, 100-46-9, Benzylamine, reactions 100-53-8, Benzylbromide Benzenemethanethiol 103-49-1, Dibenzylamine 103-67-3, 103-79-7, Phenylacetone N-Benzylmethylamine 107-91-5, Cyanoacetamide 108-23-6, Isopropyl chloroformate 109-89-7, Diethylamine, reactions 110-89-4, Piperidine, reactions 111-36-4, Butyl isocyanate Acetylacetone, reactions 140-29-4, Benzylcyanide 141-97-9, Ethyl 351-54-2, 3-Fluoro-p-anisaldehyde 367-12-4, acetoacetate 2-Fluorophenol 500-22-1, 3-Pyridinecarboxaldehyde 501-53-1, Benzyl 529-20-4, o-Tolualdehyde 592-34-7, Butyl chloroformate chloroformate 613-45-6, 2,4-Dimethoxybenzaldehyde 773-99-9, 1-Naphthaleneethanol 872-85-5, 4-Pyridinecarboxaldehyde 1126-09-6, Ethyl isonipecotate 1129-28-8, 3-Bromomethylbenzoic acid methyl ester 1485-07-0, 1679-64-7, Monomethyl terephthalate 2-Naphthaleneethanol 1885-14-9, 2043-61-0, Cyclohexanecarboxaldehyde Phenyl chloroformate 2550-36-9, (Bromomethyl) cyclohexane 2646-90-4, 2,5-Difluorobenzaldehyde 3042-81-7, Methyl α -bromophenylacetate 3695-77-0,

IT

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3978-80-1, Boc-L-tyrosine
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Triphenylmethanethiol
3-Bromo-1-phenyl-1-propene
                             4644-61-5, 3-Ethoxycarbonyl-4-piperidone
               5292-43-3, tert-Butyl bromoacetate
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hydrochloride
7693-41-6, p-Methoxyphenyl chloroformate
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                   7781-98-8, Ethyl 3-hydroxybenzoate
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2-naphthyl ester
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IT

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393793-81-2P
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RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation of pyrrolidinethiols and analogs as metalloprotease inhibitors) RE.CNT 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD RE

- (1) Abbott Lab; WO 9730046 A 1997 HCAPLUS
- (2) Banyu Pharma Co Ltd; EP 0747381 A 1996 HCAPLUS
- (3) Fujisawa Pharmaceutical Co; EP 0333175 A 1989 HCAPLUS
- (4) Fujisowa Pharmaceutical Co Ltd; JP 06263761 A 1994 HCAPLUS
- (5) Procter & Gamble; WO 9808814 A 1998 HCAPLUS
- (6) Procter & Gamble; WO 9808815 A 1998 HCAPLUS
- (7) Shionogi & Co; EP 0528678 A 1993 HCAPLUS
- (8) Sumitomo Pharma; EP 0182213 A 1986 HCAPLUS
- (9) Yoo, J; HCAPLUS
- (10) YOO, J; YAKHAK HOECHI 1999, V43(3), P306 HCAPLUS
- IT 393790-60-8P 393790-61-9P 393790-63-1P 393790-64-2P

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of pyrrolidinethiols and analogs as metalloprotease inhibitors) RN 393790-60-8 HCAPLUS

CN 1-Pyrrolidinecarboxamide, 4-mercapto-N-2-naphthalenyl-2-[(phenylmethoxy)methyl]-, (2S,4R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 393790-61-9 HCAPLUS

CN 1-Pyrrolidinecarboxamide, 4-mercapto-N-1-naphthalenyl-2-[(phenylmethoxy)methyl]-, (2S,4R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 393790-63-1 HCAPLUS

CN 1-Pyrrolidinecarboxamide, 4-mercapto-N-2-naphthalenyl-2-[[(2,4,5-

trifluorophenyl)methoxy]methyl]-, (2S,4R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 393790-64-2 HCAPLUS

CN 1-Pyrrolidinecarboxamide, 4-mercapto-N-1-naphthalenyl-2-[[(2,4,5-trifluorophenyl)methoxy]methyl]-, (2S,4R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

=> fil uspatful FILE 'USPATFULL' ENTERED AT 14:51:56 ON 22 DEC 2004 CA INDEXING COPYRIGHT (C) 2004 AMERICAN CHEMICAL SOCIETY (ACS)

FILE COVERS 1971 TO PATENT PUBLICATION DATE: 21 Dec 2004 (20041221/PD)
FILE LAST UPDATED: 21 Dec 2004 (20041221/ED)
HIGHEST GRANTED PATENT NUMBER: US6834393
HIGHEST APPLICATION PUBLICATION NUMBER: US2004255355
CA INDEXING IS CURRENT THROUGH 21 Dec 2004 (20041221/UPCA)
ISSUE CLASS FIELDS (/INCL) CURRENT THROUGH: 21 Dec 2004 (20041221/PD)
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Oct 2004

USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Oct 2004

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>>> USPAT2 is now available. USPATFULL contains full text of the
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>>> original, i.e., the earliest published granted patents or
                                                                       <<<
    applications. USPAT2 contains full text of the latest US
>>>
                                                                       <<<
    publications, starting in 2001, for the inventions covered in
>>>
                                                                       <<<
>>> USPATFULL. A USPATFULL record contains not only the original
                                                                       <<<
>>> published document but also a list of any subsequent
                                                                       <<<
>>> publications. The publication number, patent kind code, and
                                                                       <<<
>>> publication date for all the US publications for an invention
                                                                       <<<
>>> are displayed in the PI (Patent Information) field of USPATFULL
                                                                       <<<
>>> records and may be searched in standard search fields, e.g., /PN,
                                                                       <<<
>>> /PK, etc.
                                                                       <<<
>>> USPATFULL and USPAT2 can be accessed and searched together
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>>> through the new cluster USPATALL. Type FILE USPATALL to
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    enter this cluster.
                                                                       <<<
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                                                                       <<<
    Use USPATALL when searching terms such as patent assignees,
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    classifications, or claims, that may potentially change from
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    the earliest to the latest publication.
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This file contains CAS Registry Numbers for easy and accurate substance identification.

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ANSWER 1 OF 5 USPATFULL on STN
L38
AN
       2004:307996 USPATFULL
ΤI
       Pyrrolidine derivatives
       Aebi, Johannes, Basle, SWITZERLAND
TN
      Bur, Daniel, Therwil, SWITZERLAND
       Chucholowski, Alexander, San Diego, CA, UNITED STATES
       Dehmlow, Henrietta, Grenzach-Wyhlen, GERMANY, FEDERAL REPUBLIC OF
       Kitas, Eric Argirios, Arlesheim, SWITZERLAND
       Obst, Ulrike, Grenzach-Wyhlen, GERMANY, FEDERAL REPUBLIC OF
       Wessel, Hans Peter, Heitersheim, GERMANY, FEDERAL REPUBLIC OF
PΙ
       US 2004242672
                          A1
                               20041202
ΑI
       US 2004-881427
                               20040630 (10)
                          Α1
       Division of Ser. No. US 2003-373622, filed on 25 Feb 2003, GRANTED, Pat.
RLI
       No. US 6790860 Division of Ser. No. US 2001-906980, filed on 17 Jul
       2001, ABANDONED
PRAI
       EP 2000-114949
                           20000719
DT
       Utility
FS
       APPLICATION
       HOFFMANN-LA ROCHE INC., PATENT LAW DEPARTMENT, 340 KINGSLAND STREET,
LREP
      NUTLEY, NJ, 07110
      Number of Claims: 59
CLMN
ECL
       Exemplary Claim: 1
DRWN
      No Drawings
LN.CNT 5156
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       The present invention relates to pyrrolidine derivatives useful as
AB
       inhibitors of metalloproteases, e.g. zinc proteases, and which are
       effective in treating disease states associated with vasoconstriction.
```

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

393790-60-8P 393790-61-9P 393790-63-1P

393790-64-2P

(preparation of pyrrolidinethiols and analogs as metalloprotease inhibitors)

RN393790-60-8 USPATFULL

1-Pyrrolidinecarboxamide, 4-mercapto-N-2-naphthalenyl-2-CN [(phenylmethoxy)methyl]-, (2S,4R)- (9CI) (CA INDEX NAME) Absolute stereochemistry.

RN 393790-61-9 USPATFULL

CN 1-Pyrrolidinecarboxamide, 4-mercapto-N-1-naphthalenyl-2-[(phenylmethoxy)methyl]-, (2S,4R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 393790-63-1 USPATFULL

CN 1-Pyrrolidinecarboxamide, 4-mercapto-N-2-naphthalenyl-2-[[(2,4,5-trifluorophenyl)methoxy]methyl]-, (2S,4R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 393790-64-2 USPATFULL

CN 1-Pyrrolidinecarboxamide, 4-mercapto-N-1-naphthalenyl-2-[[(2,4,5-trifluorophenyl)methoxy]methyl]-, (2S,4R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

```
L38 ANSWER 2 OF 5 USPATFULL on STN
      2004:121143 USPATFULL
AN
      Bicyclic modulators of androgen receptor function
TI
      Hamann, Lawrence, Cherry Hill, NJ, UNITED STATES
IN
      Augeri, David, Princeton, NJ, UNITED STATES
PΙ
      US 2004092559
                             20040513
                        A1
      US 2003-685020
ΑI
                        A1
                             20031014 (10)
      Division of Ser. No. US 2002-209461, filed on 31 Jul 2002, GRANTED, Pat.
RLI
      No. US_667.03.86
                                      -----
      US 2001-309059P
PRAI
                        20010731 (60)
DT
      Utility
FS
      APPLICATION
      STEPHEN B. DAVIS, BRISTOL-MYERS SQUIBB COMPANY, PATENT DEPARTMENT, P O
LREP
      BOX 4000, PRINCETON, NJ, 08543-4000
      Number of Claims: 5
CLMN
ECL
      Exemplary Claim: 1
DRWN
      No Drawings
LN.CNT 2721
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB
      The invention provides compounds of the formula I
                                                        ##STR1##
```

wherein the substitutents are as described herein.

Further provided are methods of using such compounds for the treatment of nuclear hormone receptor-associated conditions, such as age related diseases, for example sarcopenia, and also provided are pharmaceutical compositions containing such compounds.

Absolute stereochemistry.

RN 496841-10-2 USPATFULL

Absolute stereochemistry.

L38 ANSWER 3 OF 5 USPATFULL on STN AN 2003:283225 USPATFULL TI Pyrrolidine derivatives IN Aebi, Johannes, Basel, SWITZERLAND Bur, Daniel, Therwil, SWITZERLAND Chucholowski, Alexander, San Diego, CA, UNITED STATES Dehmlow, Henrietta, Grenzach-Wyhlen, GERMANY, FEDERAL REPUBLIC OF Kitas, Eric Argirios, Arlesheim, SWITZERLAND Obst, Ulrike, Grenzach-Wyhlen, GERMANY, FEDERAL REPUBLIC OF Wessel, Hans Peter, Heitersheim, GERMANY, FEDERAL REPUBLIC OF ΡI US 2003199569 A1 20031023 US 6790860 B2 20040914 ΑI US 2003-373622 A1 20030225 (10) Division of Ser. No. US 2001-906980, filed on 17 Jul 2001, ABANDONED RLI PRAI EP 2000-114949 20000719 DT Utility FS APPLICATION LREP HOFFMANN-LA ROCHE INC., PATENT LAW DEPARTMENT, 340 KINGSLAND STREET, NUTLEY, NJ, 07110 CLMN Number of Claims: 61 ECL Exemplary Claim: 1 DRWN No Drawings LN.CNT 5164 CAS INDEXING IS AVAILABLE FOR THIS PATENT. AB The present invention relates to pyrrolidine derivatives useful as

inhibitors of metalloproteases, e.g. zinc proteases, and which are effective in treating disease states associated with vasoconstriction.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 393790-60-8P 393790-61-9P 393790-63-1P

393790-64-2P

(preparation of pyrrolidinethiols and analogs as metalloprotease inhibitors)

RN 393790-60-8 USPATFULL

CN 1-Pyrrolidinecarboxamide, 4-mercapto-N-2-naphthalenyl-2-[(phenylmethoxy)methyl]-, (2S,4R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 393790-61-9 USPATFULL

CN 1-Pyrrolidinecarboxamide, 4-mercapto-N-1-naphthalenyl-2-[(phenylmethoxy)methyl]-, (2S,4R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 393790-63-1 USPATFULL

CN 1-Pyrrolidinecarboxamide, 4-mercapto-N-2-naphthalenyl-2-[[(2,4,5-trifluorophenyl)methoxy]methyl]-, (2S,4R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 393790-64-2 USPATFULL

CN 1-Pyrrolidinecarboxamide, 4-mercapto-N-1-naphthalenyl-2-[[(2,4,5-trifluorophenyl)methoxy]methyl]-, (2S,4R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L38 ANSWER 4 OF 5 USPATFULL on STN

AN 2003:79166 USPATFULL

TI Bicyclic modulators of androgen receptor function

IN Sun, Chongqing, East Windsor, NJ, UNITED STATES

Robl, Jeffrey A., Newtown, PA, UNITED STATES

Salvati, Mark E., Lawrenceville, NJ, UNITED STATES

Wang, Tammy, Lawrenceville, NJ, UNITED STATES

Hamann, Lawrence, Cherry Hill, NJ, UNITED STATES

Augeri, David, Princeton, NJ, UNITED STATES

PI US 2003055094

A1 20030320

US 6670386

B2 20031230

AI US 2002-209461 PRAI US 2001-309059P A1 20020731 (10) 20010731 (60)

DT Utility

FS APPLICATION

LREP STEPHEN B. DAVIS, BRISTOL-MYERS SQUIBB COMPANY, PATENT DEPARTMENT, P O

BOX 4000, PRINCETON, NJ, 08543-4000

CLMN Number of Claims: 16 ECL Exemplary Claim: 1

DRWN No Drawings

LN.CNT 2909

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The invention provides compounds of the formula I ##STR1##

wherein the substitutents are as described herein.

Further provided are methods of using such compounds for the treatment of nuclear hormone receptor-associated conditions, such as age related diseases, for example sarcopenia, and also provided are pharmaceutical compositions containing such compounds.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 496840-99-4P, (2S)-1-[[(4-Nitro-1-naphthalenyl)amino]carbonyl]-2-

pyrrolidinecarboxylic acid methyl ester 496841-10-2P,

(2S,3R)-1-[(4-Cyanonaphthalen-1-yl)carbamoyl]-3-hydroxypyrrolidine-2-carboxylic acid methyl ester

(preparation of imidazole-containing heterobicyclic modulators of androgen receptor function)

RN 496840-99-4 USPATFULL

CN L-Proline, 1-[[(4-nitro-1-naphthalenyl)amino]carbonyl]-, methyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 496841-10-2 USPATFULL

CN L-Proline, 1-[[(4-cyano-1-naphthalenyl)amino]carbonyl]-3-hydroxy-, methyl ester, (3R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

```
L38 ANSWER 5 OF 5 USPATFULL on STN
AN
       2002:73005 USPATFULL
TT
       Pyrrolidine derivatives
       Aebi, Johannes, Basel, SWITZERLAND
IN
       Bur, Daniel, Therwil, SWITZERLAND
       Chucholowski, Alexander, San Diego, CA, UNITED STATES
       Dehmlow, Henrietta, Grenzach-Wyhlen, GERMANY, FEDERAL REPUBLIC OF
       Kitas, Eric Argirios, Arlesheim, SWITZERLAND
       Obst, Ulrike, Grenzach-Wyhlen, GERMANY, FEDERAL REPUBLIC OF
       Wessel, Hans Peter, Heitersheim, GERMANY, FEDERAL REPUBLIC OF
PΙ
       US 2002040146
                               20020404
                         A1
ΑI
       US 2001-906980
                          A1
                               20010717 (9)
PRAI
       EP 2000-114949
                           20000719
DT
       Utility
FS
       APPLICATION
       HOFFMANN-LA ROCHE INC., PATENT LAW DEPARTMENT, 340 KINGSLAND STREET,
LREP
       NUTLEY, NJ, 07110
CLMN
       Number of Claims: 29
ECL
       Exemplary Claim: 1
DRWN
       No Drawings
LN.CNT 5113
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB
       The present invention relates to pyrrolidine derivatives useful as
       inhibitors of metalloproteases, e.g. zinc proteases, and which are
       effective in treating disease states associated with vasoconstriction.
```

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 393790-60-8P 393790-61-9P 393790-63-1P

393790-64-2P

(preparation of pyrrolidinethiols and analogs as metalloprotease inhibitors) 393790-60-8 USPATFULL

1-Pyrrolidinecarboxamide, 4-mercapto-N-2-naphthalenyl-2-CN [(phenylmethoxy)methyl]-, (2S,4R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN

RN 393790-61-9 USPATFULL

CN 1-Pyrrolidinecarboxamide, 4-mercapto-N-1-naphthalenyl-2-[(phenylmethoxy)methyl]-, (2S,4R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 393790-63-1 USPATFULL

CN 1-Pyrrolidinecarboxamide, 4-mercapto-N-2-naphthalenyl-2-[[(2,4,5-trifluorophenyl)methoxy]methyl]-, (2S,4R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 393790-64-2 USPATFULL

CN 1-Pyrrolidinecarboxamide, 4-mercapto-N-1-naphthalenyl-2-[[(2,4,5-trifluorophenyl)methoxy]methyl]-, (2S,4R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

=> d his

L4

L5 L6

L9

L11

L15

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SET SMARTSELECT ON

97 TERMS L2SEL L1 1- RN : SET SMARTSELECT OFF

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63 S L3 AND C6-C6/ES

6 S L4 AND NC4/ES

1 S L5 AND C18H17N3O4

E C18H17N3O4/MF

1 S E3 AND C6-C6/ES AND NC4/ES AND 3/NR L7

L81 S L6,L7

52 S L4 AND NR>=3

L10 51 S L9 NOT L8

35 S L10 AND NCNC2-NC4/ES

16 S L10 NOT L11 L12

4 S L12 AND NCNC2-NC5/ES

L13 L14 12 S L12 NOT L13

7 S L14 NOT L5

7 S L15 NOT L8 L16

L17 STR

0 S L17 L18

L19 STR L17

L20 0 S L19

L21 STR L19

L22 0 S L21 L23 STR L21

1 S L23 L24

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L26
             1 S L23 SAM SUB=L25
L27
              9 S L23 FUL SUB=L25
               SAV L27 SHIAO685/A
L28
              8 S L27 NOT L8, L16
L29
              3 S L28 AND (NC2/ES OR C20H20N2O3 OR C29H27N3O5)
L30
              5 S L28 NOT L29
               SAV L30 SHIAO685A/A
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L32
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L33
L34
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L35
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L36
             2 S L8
              5 S L30
L37
L38
              5 S L36, L37
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     FILE 'HCAPLUS' ENTERED AT 14:51:31 ON 22 DEC 2004
     FILE 'USPATFULL' ENTERED AT 14:51:56 ON 22 DEC 2004
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